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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s) **Roger P. QUAYLE**
Serial No.: **09/432,824**
Filing Date: **November 2, 1999**
Title: **CELLULAR WIRELESS
INTERNET ACCESS SYSTEM
USING SPREAD SPECTRUM
AND INTERNET PROTOKOL**
Group
Art Unit: **2682**
Examiner: **Yuwen PAN**

Conf. No.: **1614**

CERTIFICATE OF MAILING

I hereby certify that this paper is being deposited with the United States Postal Service as first class mail in an envelope addressed to Commissioner for Patents, P. O. Box 1450, Alexandria, VA 22313-1450, on this date.

9/14/04 S
Date Steven G. Parmelee
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Attorney for Applicant(s)

Docket No.: **72408**
Cust. No.: **22242**

Please Enter
the AF and
enclosed Amendment
by the Examiner.
Lynch
10/6/04

RESPONSE TO FINAL OFFICE ACTION

Commissioner for Patents
P. O. Box 1450
Alexandria, VA 22313-1450

Dear Sirs:

In response to the Final Office Action mailed June 16, 2004, the applicants amended the claims as suggested by the Examiner. Applicants respectfully request to pass this application to allowance.

The status of pending Claims: Claims 6-10 are allowed; Claim 12 is cancelled.

Remarks/Arguments begin on page 4 of this paper.

Amendments to the Claims

Claims 1-5, 11 and 13-21 stay withdrawn; Claims 6-10 are allowed; Claim 12 is cancelled. This listing of claims will replace all prior versions, and listings, of claims in the above application.

Listing of Claims:

1-5. *currently canceled*
(Previously Withdrawn)

6. (Previously presented - Allowed) A cellular wireless internet access system comprising:

a plurality of portable subscriber terminals each having a directly attached antenna for communicating in a predetermined frequency band with a predetermined nearby cellular base station;

a plurality of cellular base stations each transmitting and receiving in said predetermined frequency band at a single frequency with a predetermined said plurality of said subscriber terminals; and

means for operating said base station on a small frequency allocation obtainable anywhere within the designated frequency band using a single frequency channel of varying bandwidth between 6 and 24 MHz using different spread spectrum transmission chip rates; and

means for operating said base station in a time-division-duplex mode to enable said transmitting and receiving at said single frequency channel thus avoiding the need for separate channels spaced apart for transmit and receive and including means for allocating the ratio of time for transmitting and receiving on a predetermined basis said time division as a function of expected traffic demand;

means for providing high net data rates of 1.5 - 3.0 Mbps using a plurality of data bearer subchannels on a said single frequency channel, orthogonal downlink spreading codes for CDMA transmission, and successive interference cancellation or simultaneous uplink spreading codes.

7. (Original - Allowed) A system as in claim 6 where each band is divided in the time domain into frames and each frame has a predetermined number of time slots allocated to control, uplink, and downlink communications between said cellular base stations and subscriber terminals.

8. (Original - Allowed) A system as in claim 7 where some of said frames are dedicated to backhaul communication between base stations on a peer-to-peer basis.

9. (Original - Allowed) A system as in claim 7 where the data transmission rate is increased during time domain frames used for backhaul communication by switching to directional antennas during these timeslots thus providing an improved radio channel quality to support such increased data rate.

10. (Previously Presented - Allowed) A system as in claim 6 where said means for using different transmission chip rates provides net data rates of 1.5 - 3.0 Mbps on said small frequency allocation.

currently canceled
11. (~~Previously Withdrawn~~)

12. (Currently Cancelled)

currently canceled
13 - 21 (~~Previously Withdrawn~~).

Appln. No. 09/432,824
Amendment dated 9/14/04
Reply to Office Action of 6/16/2004

Attorney Docket No. 72408

REMARKS

Claims 6-10 and 12 were pending in this application. In the Final Office Action mailed on June 16, 2004, Examiner rejected claim 12, and allowed claims 6-10. Applicants appreciate the time and consideration provided by the Examiner in reviewing this application. By this response, applicants canceled claim 12.

It is respectfully submitted that the application is now in condition for allowance, which allowance is earnestly solicited.

The Commissioner is hereby authorized to charge any fees which may be required in this application under 37 C.F.R. §§1.16-1.17, or credit any overpayment, to Deposit Account No. 06-1135.

Respectfully submitted,
FITCH, EVEN, TABIN & FLANNERY

By: 

Steven G. Parmelee
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Date: 9/14/04

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